

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for restoring blood flow in an subject that is identified as having an ischemic condition ~~treating a disorder characterized by insufficient cardiac function in a subject,~~ comprising:

-administering to the subject a an amount of a composition comprising a concentrated cell population that comprises adipose derived stem cells effective to restore blood flow to the ischemic region of said subject, ~~such that the disorder is treated.~~

2. (Original) The method of claim 1, wherein the subject is human.

3. (Cancelled)

4. (Currently amended) The method of claim 1, wherein the said composition comprising said concentrated cell population that comprises adipose-derived stem cells further comprises adipose ~~adipose-derived cells are comprised of progenitor cells.~~

5. (Cancelled)

6. (Currently amended) The method of claim 1, wherein the disorder said ischemic condition is congestive heart failure.

7. (Currently amended) The method of claim 1, wherein the disordersaid ischemic condition is myocardial infarction.

8. (Currently amended) The method of claim 1, wherein the method comprises administering a bolus of the adipose derived cells ~~said composition is administered to said subject in a bolus.~~

9. (Currently amended) The method of claim 1, wherein the method comprises administering said composition is administered to said subject in ~~multiple doses of the adipose derived cells.~~

10. (Original) The method of claim 1, wherein the composition further comprises one or more angiogenic factors.

11. (Original) The method of claim 1, wherein the composition further comprises one or more arteriogenic factors.

12. (Original) The method of claim 1, wherein the composition further comprises one or more immunosuppressive drugs.

13. (Currently amended) The method of claim 1, wherein the composition is administered to said subject via an endomyocardial, epimyocardial, intraventricular, intracoronary, retrosinus, intra-arterial, intra-pericardial, or intravenous administration route.

14. (Currently amended) The method of claim 1, ~~further comprising administering the composition wherein said composition is administered~~ to the subject's vasculature.

15. (Currently amended) The method of claim 1, ~~wherein the further comprising culturing said concentrated cell population that comprises~~ adipose derived stem cells ~~are grown in cell culture prior to being administered~~ administration to the patient.

16. (Currently amended) The method of claim 1, wherein ~~the said concentrated cell population that comprises~~ adipose derived stem cells are grown in culture conditions that promote differentiation towards a myocytic phenotype.

17. (Original) The method of claim 16, wherein the myocytic phenotype is a cardiac myocytic phenotype.

18. (Original) The method of claim 16, wherein the myocytic phenotype is a skeletal myocytic phenotype.

19. (Original) The method of claim 16, wherein the myocytic phenotype is a vascular smooth muscle myocytic phenotype.

20. (Original) The method of claim 15, wherein the cell culture conditions promote differentiation towards an endothelial phenotype.

21. (Currently amended) The method of claim 15, wherein the cell culture is performed on a scaffold material to generate a two or three dimensional construct that ~~can be placed~~ configured for placement on or within the heart.

22. (Original) The method of claim 21, wherein the scaffold material is resorbable in vivo.

23. (Currently amended) The method of claim 1, ~~wherein the adipose derived cells are modified~~ further comprising modifying said concentrated cell population that comprises adipose-derived stem cells by gene transfer such that expression of one or more genes in the modified adipose derived cells is altered.

24. (Currently amended) The method of claim 23, wherein the modification results in ~~alteration of~~ alters the level of angiogenesis in the subject.

25. (Currently amended) The method of claim 23, wherein the modification ~~results in alteration of~~ alters the level of arteriogenesis in the subject.

26. (Currently amended) The method of claim 23, wherein the modification ~~results in alteration of~~ alters the level of apoptosis in the subject.

27. (Original) The method of claim 26, wherein apoptosis of cardiac myocytes is altered.

28. (Currently amended) The method of claim 23, wherein the modification results in alteration of the homing properties of the concentrated population of cells comprising adipose derived stem cells.

29-82. (Cancelled)

83. (New) The method of Claim 1, wherein said restoring blood flow comprises angiogenesis.

84. (New) The method of Claim 1, wherein said restoring blood flow comprises arteriogenesis.

85. (New) The method of Claim 1, wherein said restoring blood flow comprises an inhibition of apoptosis.

86. (New) The method of Claim 1, wherein said restoring blood flow comprises an inhibition of scar formation.